

**Notice of Allowability**

Application No.

10/787,409

Examiner

Lucy P. Chien

Applicant(s)

KIM ET AL.

Art Unit

2871

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 2/27/2004.
2. ☒ The allowed claim(s) is/are 1-9, 19, 21-28 and 34-40.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Valerie Hayes on 7/20/2006.

Cancelled Claims: 10-18,20,29-33.

***Election/Restrictions***

Claim 1-9, 19, 21-28 directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(B), claim 34-40, directed to the process of making or using an allowable product, previously withdrawn from consideration as a result of a restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Because all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, the restriction requirement as set forth in the Office action mailed on 10/12/2005 is hereby withdrawn. In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claims including all the limitations of an allowable product claim or rejoined process claim are presented in a continuation or divisional application, such claims may be subject to

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provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

**Claim 1-9, 19, 21-28,34-40 are allowed.**

The following is an examiner's statement of reasons for allowance:

Regarding Claim 1,

Chung et al (US 20010022634) discloses (Figure 9A-C) a transfective liquid crystal comprising a thin film transistor (where S is located) disposed at a corner of a pixel region, the thin film transistor including a gate electrode (152) a semiconductor layer (174) a source electrode (162) and a drain electrode (164) a reflector (156 where P is located) disposed in the pixel region and spaced apart from the thin film transistor, wherein the pixel region is divided into a reflective portion (where P is located) including the reflector and a transmissive portion (where 154 is located) absent of the reflector.

Chung et al does not disclose the reflector formed of the same material as one of the gate, source, and drain electrodes, a color filter disposed within the pixel region, the color filter having one of red, green, and blue colors a black matrix over the thin film transistor corresponding to color filter borders of adjacent pixel regions

Kikkawa et al (US 6879359) (figure 2) discloses the reflector (23) formed of the same material (same layer as 22) as one of the gate, source, and drain electrodes. A color filter (30) disposed within the pixel region, the color filter (30) having one of red, green, and blue colors a black matrix over the thin film transistor corresponding to color

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filter borders of adjacent pixel regions, and a pixel electrode (31) formed of a transparent conductive material adjacent to the color filter.

The prior art of record does not teach nor suggest a second pixel electrode on the color filter contacting the first pixel electrode.

Claim 2,5,8,9,19,21, are dependent on Claim 1, therefore is allowed.

Regarding Claim 3,6

The prior art of record does not teach nor suggest wherein the reflector and the gate electrode have double-layered structures including a second layer on a first layer, the second layer of the reflector is partially removed to expose an underlying portion of the first layer of the reflector.

Claim 4 is dependent on Claim 3, and Claim 6 is dependent on Claim 7, therefore is allowed.

Regarding Claim 22,26

The prior art of record does not teach nor suggest a first buffer pattern disposed in a pixel region on the substrate and spaced apart from the gate electrode; a reflector on the second buffer pattern, the reflector formed of the same material as the source and drain electrodes. And a second buffer pattern formed of the same material as the semiconductor layer and formed during the same time as formation of semiconductor layer, the second buffer pattern disposed above the first buffer pattern in the pixel region,

Claims 23-25 are dependent on Claim 22 therefore are allowed.

Claims 27,28 are dependent on Claim 26 therefore are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

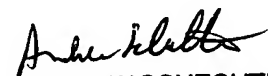
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien  
Examiner  
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ANDREW SCHECHTER  
PRIMARY EXAMINER